

EXHIBIT I

Barge Hits Bridge on I-40 in Okla.

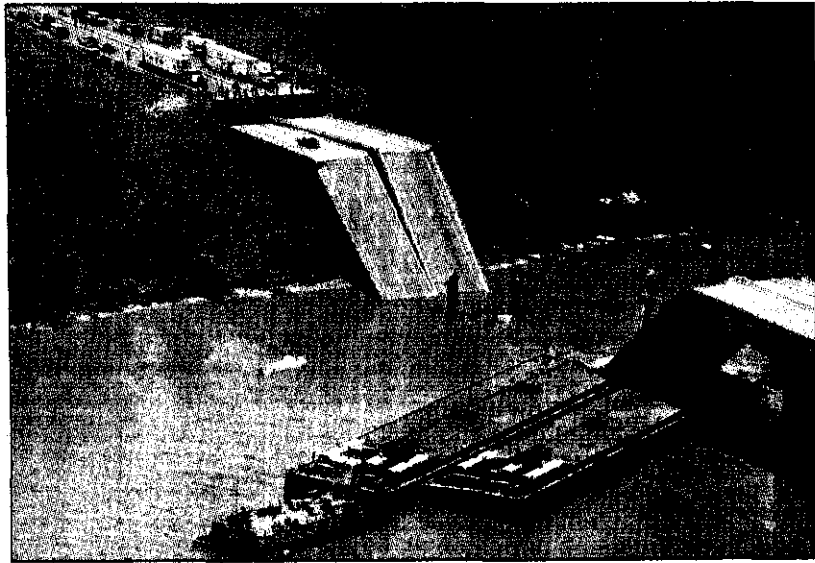
Rescuers Search River; Several Feared Dead

By LOIS ROMANO
and ELLEN NAKASHIMA
Washington Post Staff Writers

WEBBERS FALLS, Okla., May 26—An empty barge plowed into a bridge on Interstate 40 over the Arkansas River this morning, knocking out a 600-foot section of the span and plunging into the murky water an estimated seven to nine vehicles with people trapped inside.

Rescue crews this evening retrieved three bodies from three vehicles that were pulled from the 11-foot-deep water before the search was suspended for the night. Engineers worked for eight hours to stabilize the bridge before diving crews were sent in to recover bodies about 4:30 p.m. Central time.

Officials hope to recover all the bodies by Monday afternoon, said Kevin Ward, assistant commissioner for the Oklahoma Department of Public Safety. "It's taking a little longer than we thought to pull the cars up. I imagine they are on top of each other," he said.



BY JEFF MITCHELL—REUTERS

Two barges sit under the Interstate 40 bridge in Oklahoma after hitting and collapsing a 600-foot section of the highway, plunging several vehicles into the river.

Barge captain Joe Dedmon, who was at the bridge of a towboat pushing the vessel upriver at 5 mph, passed out or blacked out before the crash, a spokesman for the barge company said tonight.

Dedmon, 51, was undergoing medical tests, including a routine drug test, at nearby Muskogee Regional Medical Cen-

See **BRIDGE**, A10, Col. 1

Several Feared Dead After Barge Hits Bridge

BRIDGE, From A1

ter. An investigation has been opened into the cause of the accident. Oklahoma Gov. Frank A. Keating (R) has requested the area be designated a federal disaster site, making it eligible for federal dollars.

"This does not at all appear to be anything more than one of those tragic human accidents," Keating said at a briefing at a nearby truck stop. "The loss of life is something that is unbearable for all of us."

At least five people whose cars or trucks plummeted 60 feet into the river were treated for injuries, none of them life-threatening. Four were rescued in the first 30 minutes after the collapse shortly before 8 a.m. None of the barge's six crew members were injured. They remained on the 104-foot-long towboat this evening, along with Coast Guard officials. One of the first to fall into the river was trucker Rodney Tidwell, 37, of Ripley, Miss.

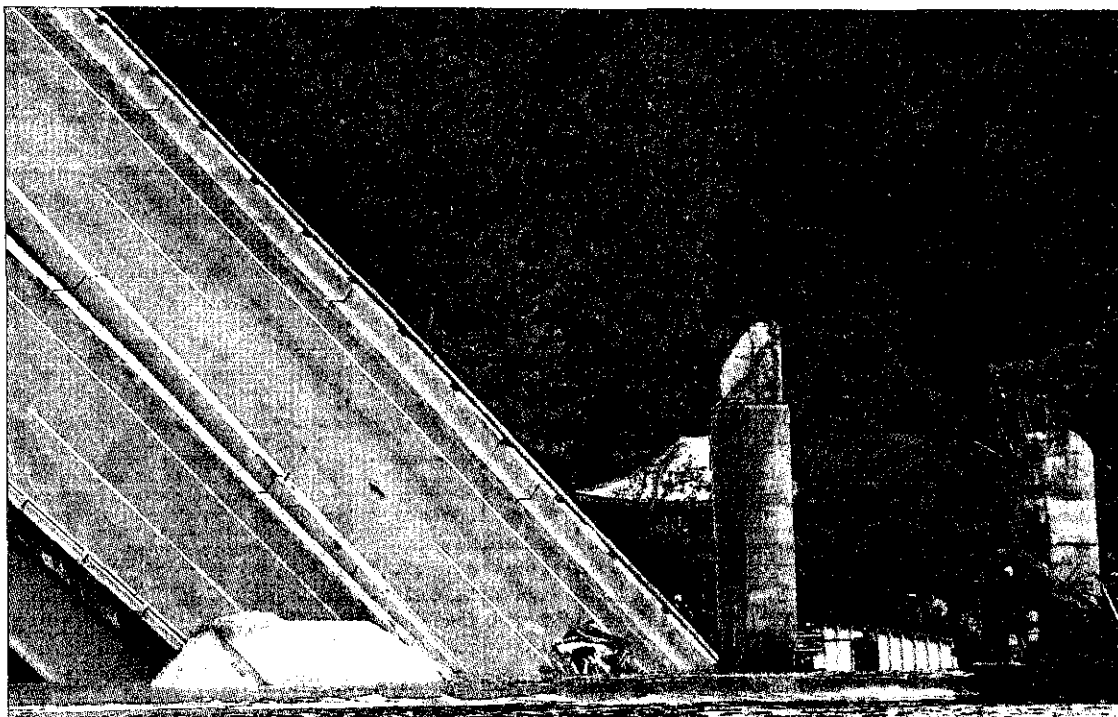
"He's riding along there—he had just got up off of an eight-hour break," said his father, Jessie Tidwell. He spoke to his son shortly after the accident and was driving from Ripley to see him at Muskogee Regional Medical Center. "All at once there's no bridge there. Just out of nowhere the bridge was gone. The next thing he knew, there was a big post coming at him. He hit it."

Rodney Tidwell was in stable condition this evening, with 16 stitches on his face, some broken ribs and a possible broken shoulder, his father said. "He's going to be all right," he said.

Emergency medical rescue teams received the first distress calls at 7:53 a.m. in this small town 35 miles west of the Arkansas state line. Minutes earlier, authorities said, the barge, owned by Magnolia Marine Transport Co. of Vicksburg, Miss., hit a pier that supports the 35-year-old bridge. The bridge collapsed, coming to rest partly on the barge, partly on the water.

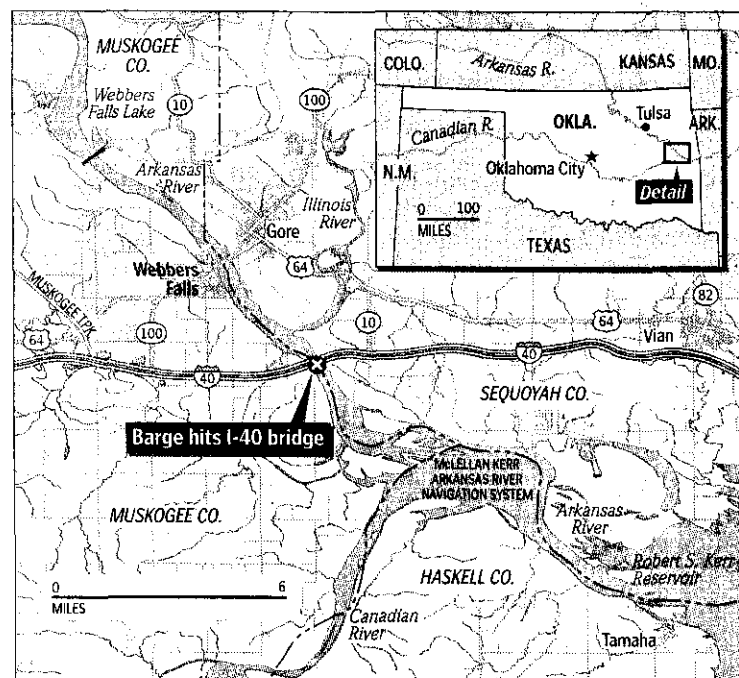
The vessel, composed of two barges, was bound for the Port of Catoosa at Tulsa, about 135 miles away, to pick up a load of asphalt. The 55-foot-wide, 495-foot-long barges floated side by side, pushed by the towboat. They had departed from Decatur, Ala., six days ago, traveling along the Tennessee River to the Ohio, the Mississippi and the Arkansas, company officials said.

Officials from the National Transportation Safety Board were on their way to the scene in southeast Oklahoma this evening. Already there were crews from the Coast Guard, the Army Corps of Engineers and state and local agencies, including the Oklahoma Highway Patrol. Aiding them were about 150 rescue



BY JERRY WILLIS—MUSKOGEE DAILY PHOENIX VIA ASSOCIATED PRESS

The wreckage of a tractor-trailer rig rises above the waters of the Arkansas River after a barge hit the I-40 bridge.



BY MICKEY EDWARDS AND LARIS KARKLIS—THE WASHINGTON POST

workers from local fire departments and county emergency units from Oklahoma and Arkansas.

Fishermen who saw the accident said seven to nine vehicles fell into the water, but state officials say they will not know the exact number until the divers complete their recovery.

Both east- and west-bound spans of the 1,988-foot bridge collapsed like a V into the river. Rotating teams of six divers were sent into the water. "They can't see into the cars. They are just doing some feeling," said Ward, the public safety official.

"This is a 20,000-vehicle-a-day road, which is obviously not a sparsely populated road," Keating said. "It is a major thoroughfare across the United States. And to have it disrupted is not good news for commerce."

Rodney Tidwell was headed west on I-40, bound for Sparks, Nev., with a load of water hoses in his 18-wheel rig when he hurtled into the river. He did not know how he escaped; apparently other drivers helped him, said his father, who owns the truck. Tidwell was driving. Though his son usually eschews a seat belt, this time, he wore one, said Jessie Tidwell—"or he would have gone through the windshield." His son called him right after the accident on a borrowed cell phone, sitting on the riverbank "kinda in shock," his father said.

James Bilyeu, 62, has been a trucker for 40 years—with nary a speeding ticket—and was three months from retirement. The Con-

See BRIDGE, A11, Col. 1

Rescuers Search for Bodies After Accident in Oklahoma

BRIDGE, From A10

way, Ark., grandfather had left late Saturday night, picked up a load in Little Rock and was headed to Weatherford, Okla., to return early Monday. He called his family from an ambulance shortly after the accident. His wife and daughter thought it would be the last time they spoke to him, said Jolene Staker, a friend who was at Billyeu's home today.

But hospital staff called after he arrived to let them know he was up and walking and would be all right, Staker said. "He's just a really awesome,

family-loving type guy," she said. "He couldn't wait to get home and retire and fish."

A silver Dodge Dakota was still on the bridge's east-bound span this evening. Traveling in the car had been Max Alley, 67, and Goldie Alley, 68, of Stroud, Okla., who were listed in stable condition at the Muskogee hospital. A fifth survivor, whose name was not released, was listed in stable condition at Sequoyah Memorial.

Visibility apparently was poor this morning, observers said.

Pansy Marquez de la Plata, who

lives six miles from the bridge, was awakened by the first wave of sirens at 8:03. A thunderstorm had passed through in the morning and it was unusually dark. "It was sorta foggy," she said. "I got pretty dark here at the house. I had to put the light on to see anything. Normally, it would be light at 8 o'clock."

Magnolia Marine personnel directed Shane Guthrie said today's accident was the worst in the transport company's 33-year history. In 1993, a Magnolia Marine barge slammed into a Norfolk Southern Corp. bridge pier on the Tennessee River near

Knoxville, Tenn., but no fatalities resulted. Magnolia is owned by Ragon of Jackson, Miss. About five or six company officials flew to the scene aboard a chartered jet this afternoon, he said. The company confirmed that Dedmon, who had worked for Magnolia for 12 years and had 25 years river experience, had passed out or blacked out before the barges hit the bridge.

There are no houses near the bridge, just fields of soybeans and corn flanking the Sequoyah Wildlife Refuge. Shortly after the accident, food and clothes and diapers could

be seen floating in the water. Tonight, three dead horses that had been in a trailer behind a vehicle on the bridge were brought up with the wreckage.

Nationwide, an estimated 10,000 bridges cross navigable waterways, which carry 15 percent of the nation's freight. Though accidents such as this one are rare, last year a barge hit a bridge on South Padre Island, Tex., said Tom Allegritti, president of American Waterways Operators, which represents barge lines. He said the industry is willing to take whatever "corrective action" may be

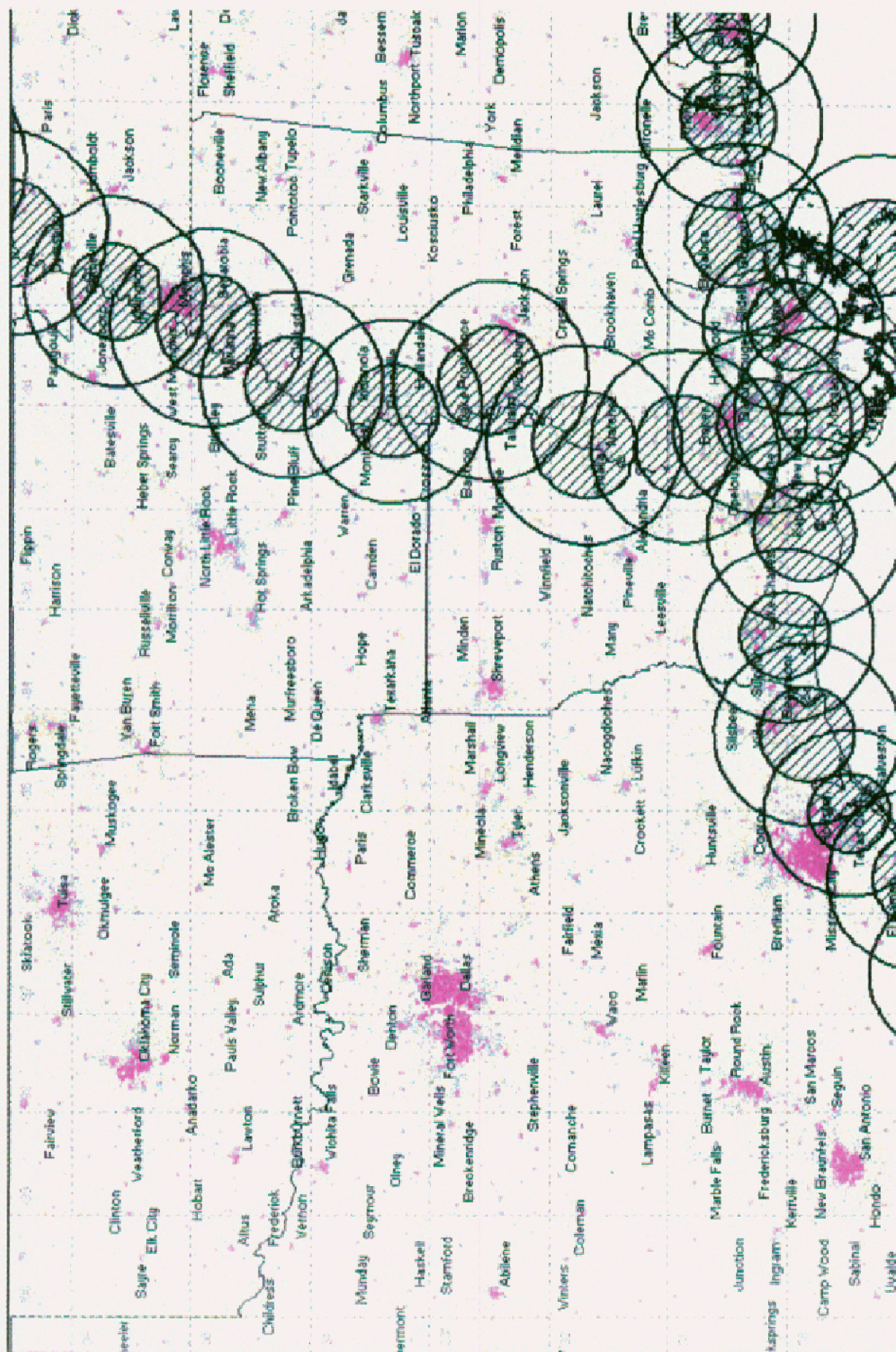
MONDAY, May 27, 2002 A11

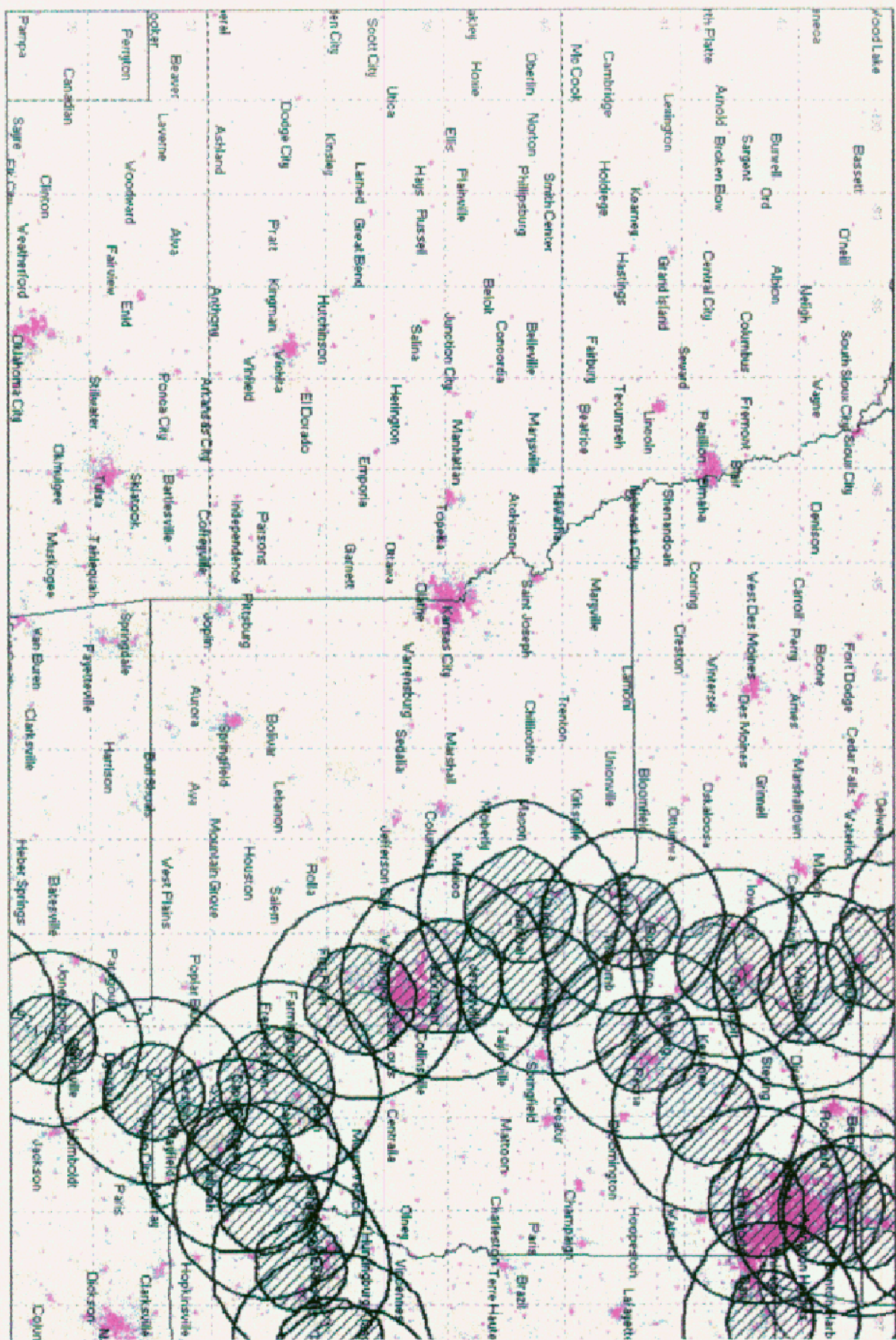
necessary to prevent further tragedies. The bridge, which was built in 1967, was inspected in 2001, and an Oklahoma Transportation Department worker said it was "shown to be in great shape, no problems."

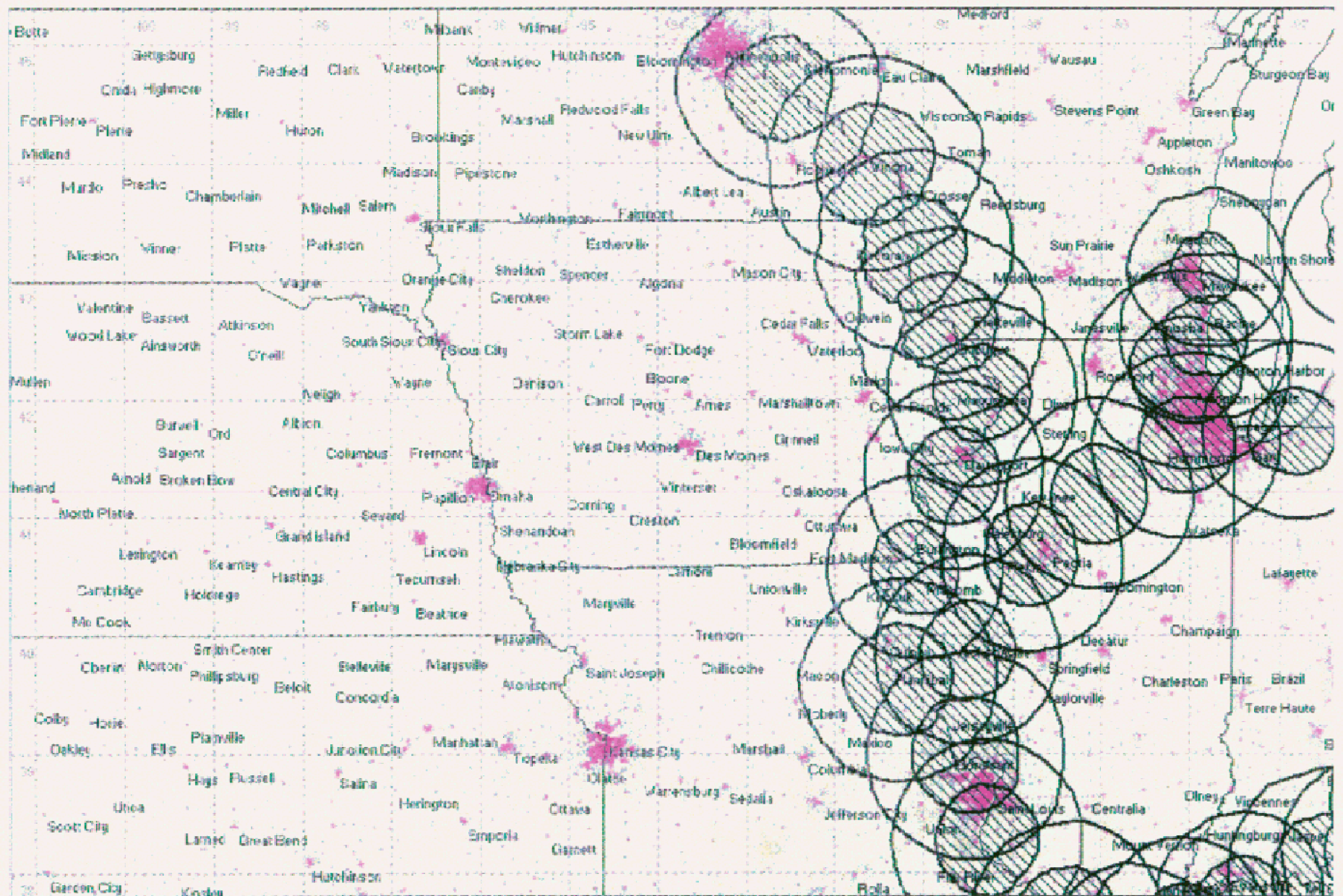
Four bridge spans and three bridge piers were destroyed. Repairs are expected to cost "millions of dollars," said U.S. Rep. Brad Carson (D-Okla.), who has requested emergency funding. Usually it takes 12 to 14 months to complete a new bridge, but the state is hoping to finish in six months.

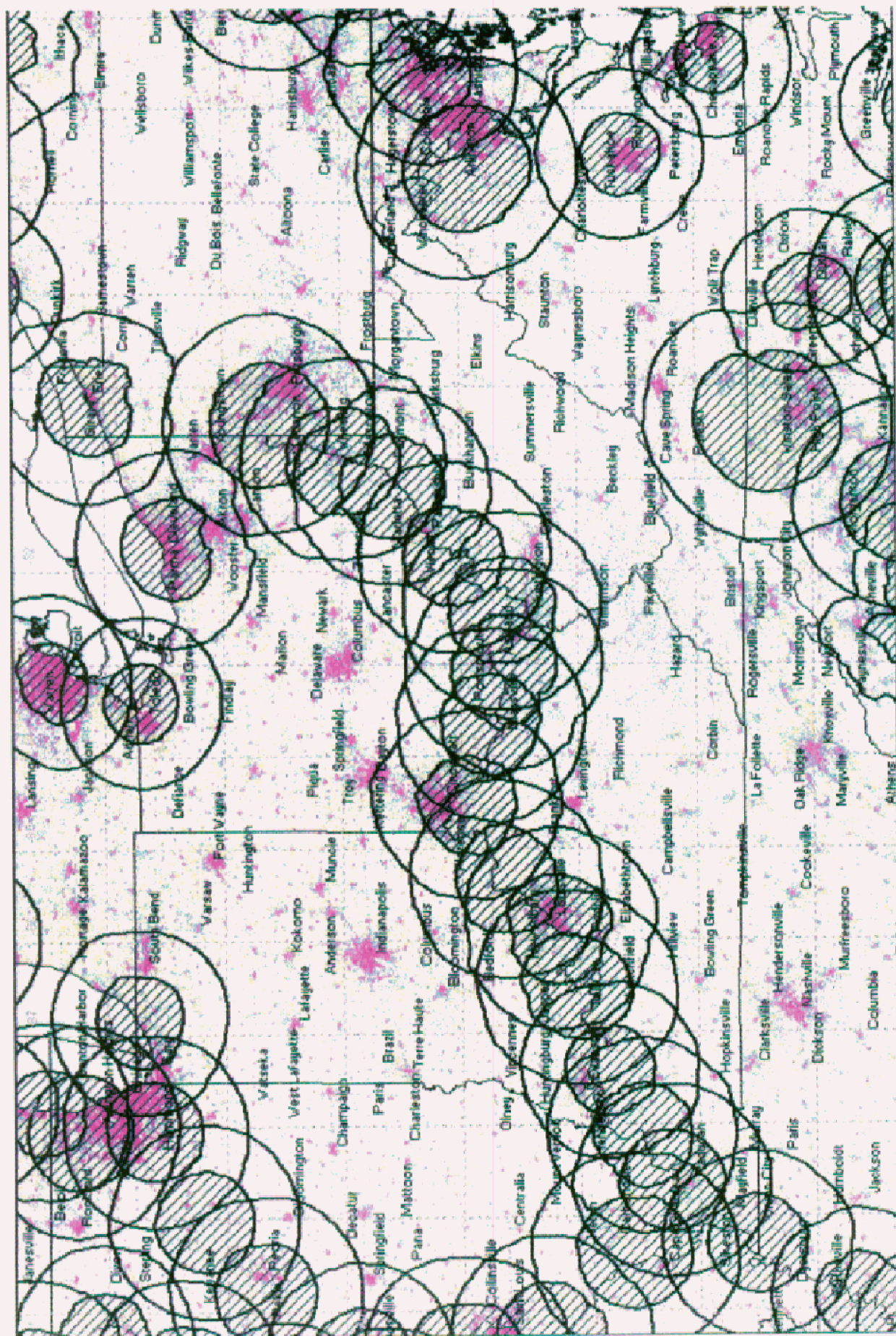
Romano reported from Oklahoma. Nakushima from Washington. News researcher Don Pohman contributed to this report.

EXHIBIT II









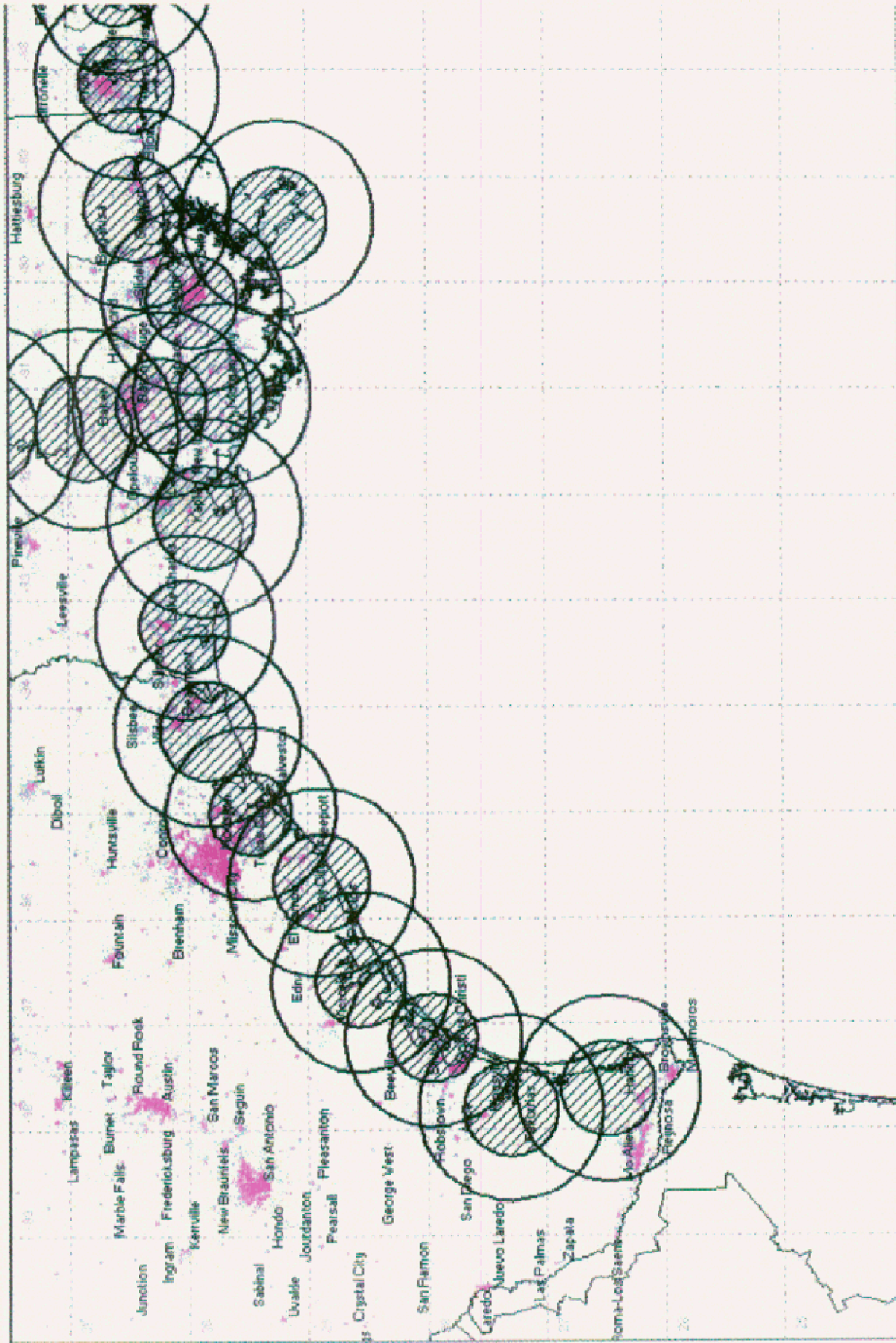


EXHIBIT III

DECLARATION

I, Raymond C. Trott, P.E., declare under penalty of perjury that:

I am Chairman of Trott Communications Group ("TCG"), Inc. formerly Raymond C. Trott Consulting Engineers, Inc., an independent engineering company founded in 1978 and located in Irving, Texas. I am a registered professional engineer in the State of Texas (Reg No. 23457E).

Over the past several years, I have personally prepared many contour exhibits in conjunction with applications to the FCC for SMR, 217 - 219 MHz and Part 22 & Part 90 paging stations. These contours have been related to short space interference studies and for exhibits showing containment of interference contours to establish that the applications are minor.

In addition, TCG is retained by governmental and commercial entities to design standard and sophisticated radio communications systems. As part of the design of these systems, TCG often lays out the rf system network of antenna sites to assure that the system has reliable contiguous service over the required area. With today's mobile equipment, it is not unusual for the use of service areas with signal levels approaching 2 μ volts at the perimeter of individual antenna sites.

TCG was retained by Mobex, Inc. to investigate the most realistic value for a reliable service contour in the 217 - 219 MHz frequency band and also investigate different Carrier to Interference Ratios (C/I) of 10 vs 18 dB to see if is possible for a geographical licensee to theoretically place a transmitter between Mobex's authorized locations based on the FCC's short space criteria.

The Engineering Study is attached.

The above statements are true to the best of my knowledge and belief.



Raymond C. Trott, P.E.
August 15, 2002

ENGINEERING STUDY

Ref: PR Docket No. 92-257
RM-9664

This report addresses two issues from the above referenced FCC Second Memorandum Opinion and Order and Fifth Report and Order; protected service contour, and the carrier-to-interference ("C/I") co-channel interference protection.

Protected Service Contour

In the above referenced Report and Order ("R & O"), the Commission makes a statement that, "... incumbents should be protected to a 38 dBu service contour because it doubted that the signal strength beyond such a contour produces a quality of service deserving protection". The following demonstrates that the 20.5 dBu service contour represents a high level of service based on accepted engineering practices and industry standards.

The mobile receiver used by Mobex has a static sensitivity of 0.3 μ volts for 12 dB SINAD. This equates to a received signal level of -117.4 dBm.

Per TIA/EIA TSB-88, Annex-A, Table 5, 12 dB SINAD represents a 7 dB signal-to-noise ratio ("S/N") for an analog FM 12.5 kHz channel with a deviation of ± 2.5 kHz. Assuming a receiver sensitivity of -117.4 dBm, the receiver noise is estimated at -124.4 dBm (-117.4 dBm - 7 dB = -124.4 dBm) or a 10.6 dB receiver noise figure.

For the purposes of this evaluation, it is assumed that a "quality service" is defined by circuit merit intelligibility equivalent to Delivered Audio Quality ("DAQ") 3. Per TIA/EIA TSB-88, Annex-A, Table 1, DAQ 3 is defined as, "Speech understandable with slight effort; occasional repetition required due to noise/distortion". DAQ 3 is generally considered an acceptable grade of service for commercial two-way systems. Public Safety systems are usually afforded a higher grade of service.

Per TIA/EIA TSB-88, Annex-A, Table 5, a DAQ 3 requires a S/(N+I) of 23 dB in a Raleigh faded environment. The equivalent DAQ 3 sensitivity is -124.4 dBm + 23 dB or -101.4 dBm, which equals 1.9 μ volts or 20.5 dBu. This calculation does not consider additional degradation due to co-channel interference, which is addressed separately. Therefore, based on accepted engineering practices and industry standards, a 20.5 dBu contour should represent a reliable service area at 220 MHz.

By comparison, a 38 dBu contour equates to a received signal level of -83.8 dBm. This level is 17.6 dB stronger than the requirement for DAQ 3 and stronger than the requirements for any normal land mobile application. Based on the analysis above, the standard for a protected reliable service area at 220 MHz should be 20.5 dBu, not the 38 dBu level specified by the Commission.

Carrier-to-Interference Protection

Existing land mobile regulations have consistently utilized a C/I of 18 dB or greater for the evaluation of co-channel interference. The 800 MHz and 900 MHz frequency bands have long since required a C/I of 18 dB for co-channel stations in close proximity. This criterion has been used for the successful deployment of 800 MHz and 900 MHz systems throughout the country.

More recently the FCC has adopted rules for the deployment of trunked radio systems in the bands between 150 and 512 MHz. Per Section 90.187(b)(2)(iii), the C/I requirement has been set at 18 dB for co-channel stations within 70 miles for both the UHF and VHF bands.

In the R & O, the Commission acknowledges an Engineering analysis from Motorola, which requests a greater co-channel protection standard in the 800/900 MHz bands. The Commission states, "Given the difference in propagation characteristics, we feel that the burden is on the proponents to demonstrate why the Motorola 800/900 MHz analysis should govern our decision in the AMTS band."

The specific frequency band and propagation characteristics are not relevant to the interference performance of the radio equipment. The subscriber equipment produced by most vendors has similar if not the same sensitivity and interference rejection specifications for like modulation types, regardless of band. In the case of the AMTS band, Mobex utilizes analog FM 12.5 kHz channels with a deviation of ± 2.5 kHz. The same channel and radio equipment parameters are commonly used in the 900 MHz, UHF, and VHF bands. There should be no fundamental difference between the equipment performance in any of these bands or the AMTS band. The FCC has used an 18 dB C/I as the basic co-channel protection requirement for 900 MHz, 800 MHz, UHF, and VHF systems, and Mobex has asked for the same 18 dB protection in the AMTS band.

With reference to TIA/EIA TSB-88, the Spectrum Management process outlined in Annex-C Section C.7.1.2 recommends a minimum of 15 dB margin between the desired and interfering signal level based upon the channel performance criteria established, i.e. service area definition.

Regulatory and Geographic Considerations

In Paragraph 32 of the R&O, the Commission states that their engineering analysis of incumbent systems shows that it will not be possible for a geographic licensee to interpose a facility between co-system incumbent stations.

In the following analysis, four groups of adjacent sites under incumbent authorization WRV374 were investigated to see if, using a 38 dBu F(50,50) service contour, geographic licensees could insert a facility between WRV374 adjacent sites. In all cases studied, using reasonable parameters, a transmitter could be inserted between the adjacent incumbent stations without the inserted transmitter's 28 dBu F(50,10) interference contour (C/I = 10 dB) overlapping the incumbent's 38 dBu service contours. Further, when the interference contours of the inserted stations were increased to 20 dBu (C/I = 18 dB), it showed interference (overlap) to the incumbent's 38 dBu service contours.

For each adjacent site analysis, there are two exhibits. One shows the 28 dBu interference contour ($C/I=10$ dB) of the inserted site with no overlap of the incumbent 38 dBu contour while the second exhibit shows the same inserted site's 20 dBu interference contour ($C/I = 18$ dB) overlapping the adjacent sites' 38 dBu contours.

The inserted sites were selected from the FCC database, either by current licensee or by ASR number. The parameters of these inserted sites are found in Exhibit TCG-1.

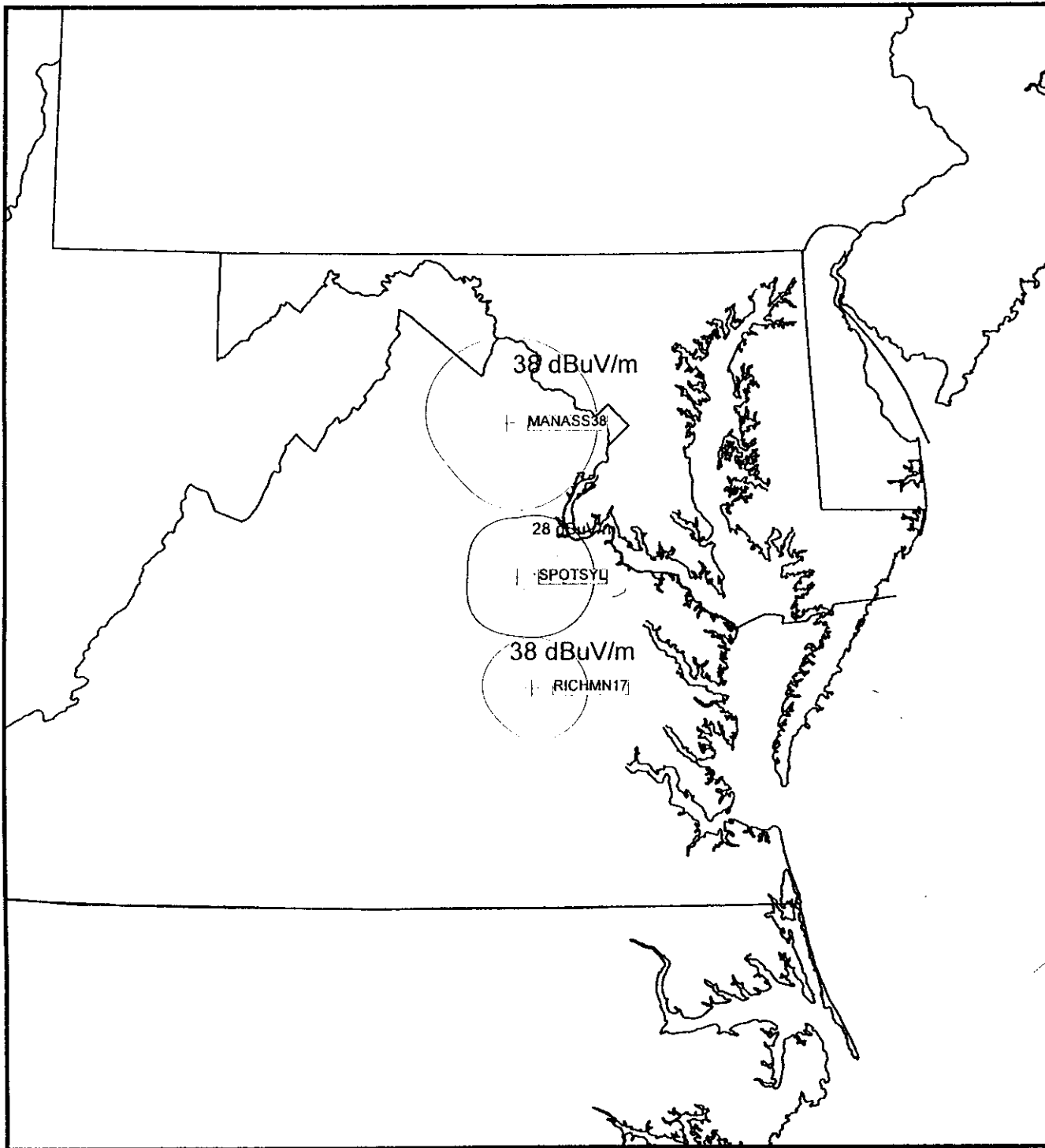
Thus, it is obvious from the above study that the Commission's standard of a 10 dB C/I and a reliable protected service area of 38 dBu would allow geographic licensees to insert co-channel stations between those of incumbent licensees causing gaps in the previously contiguous coverage of the incumbent. Utilizing either a 20.5 dBu service contour or a C/I of 18 dB would prevent co-channel licensees from interrupting the contiguous coverage of the incumbent. However, regardless of the C/I specified for regulatory purposes, an actual C/I of 15 to 18 dB is required for adequate system performance.

Recommendations

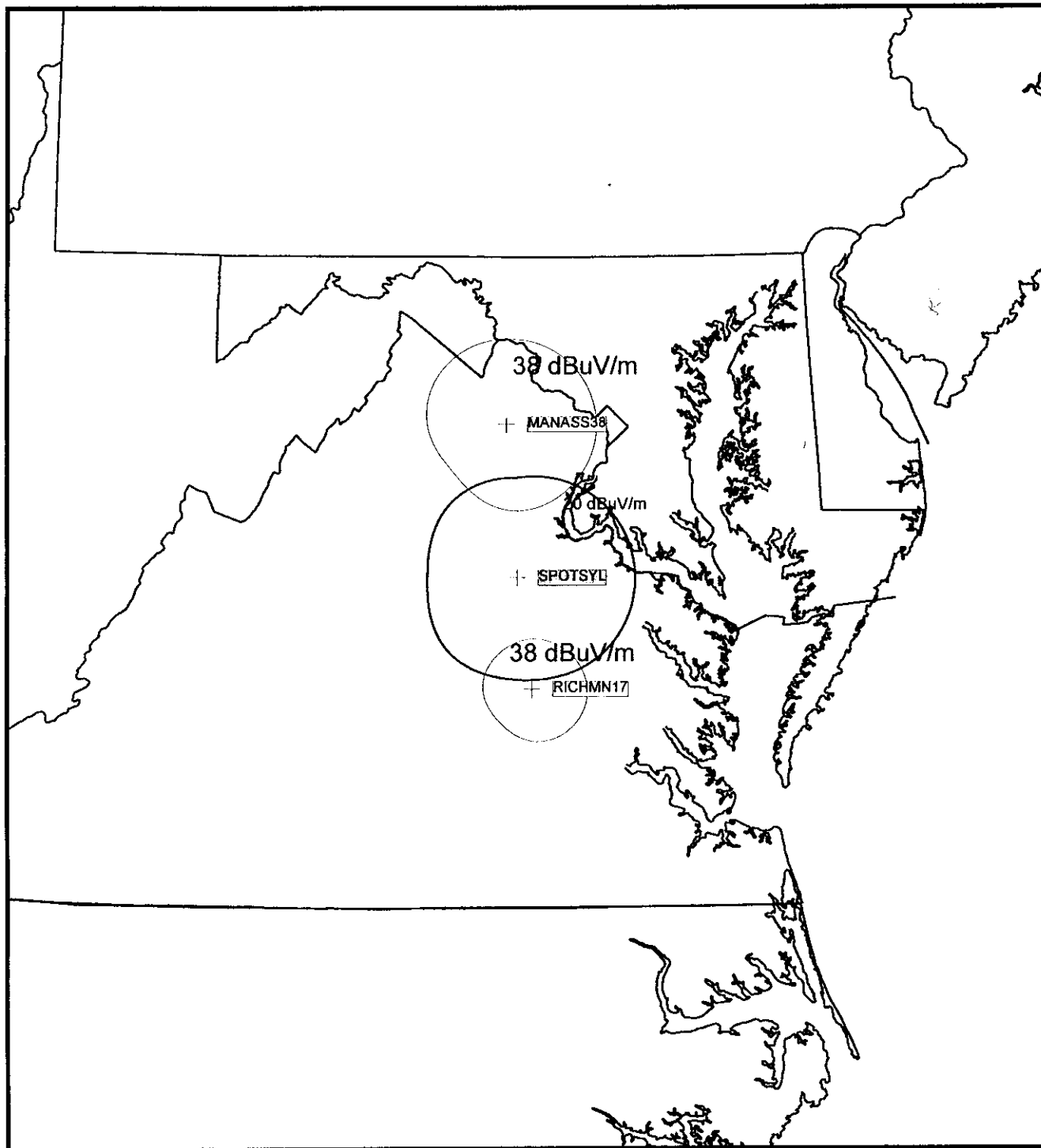
1. Based on a realistic system evaluation and accepted engineering practices, a contour level of 20.5 dBu should define usable service and represent the protected service area contour for stations in the AMTS band.
2. Based on existing land mobile regulations, engineering practices in the industry, and recommendations from TIA/EIA TSB-88, a carrier-to-interference ratio of 15 to 18 dB should be required to adequately protect incumbent stations and allow for continued operation.
3. Based on actual examples, the current service area definition and C/I requirement allows geographic licensees to interpose new stations between co-channel incumbent stations. Revising the protected service area definition and C/I requirement to realistic values will prevent the implementation of interstitial stations.

**EXHIBIT TCG-1
INSERTED SITES**

[illegible]



| | |
|--|--|
| SIGNAL™: MOBEX17.map | |
| Prop. model: FCC-FCC Time: 10.0% Loc.: 50.0% Prediction Confidence Margin: 0.0dB Climate: Continental Temperate Groundcover: none Atmospheric Abs.: none K Factor: 1.333 RX Antenna - Type: OMNI Height: 1.5 m AGL Gain: 0.00 dBd Field strength at remote ■ = 28.0 dBuV/m Min. receiver threshold level: -200.0 dBmW | |
| KILOMETERS -25 0 100 | |
| 38/28 dBu CONTOUR STUDY MOBEX COMM BETWEEN MANASSAS & RICHMOND | |
| Exhibit TCG-2a | |



SIGNAL™: MOBEX18.MAP

Prop. model: FCC-FCC
Time: 10.0% Loc.: 50.0%
Prediction Confidence Margin: 0.0dB
Climate: Continental Temperate
Groundcover: none
Atmospheric Abs.: none
K Factor: 1.333
RX Antenna - Type: OMNI
Height: 1.5 m AGL Gain: 0.00 dBd
Field strength at remote

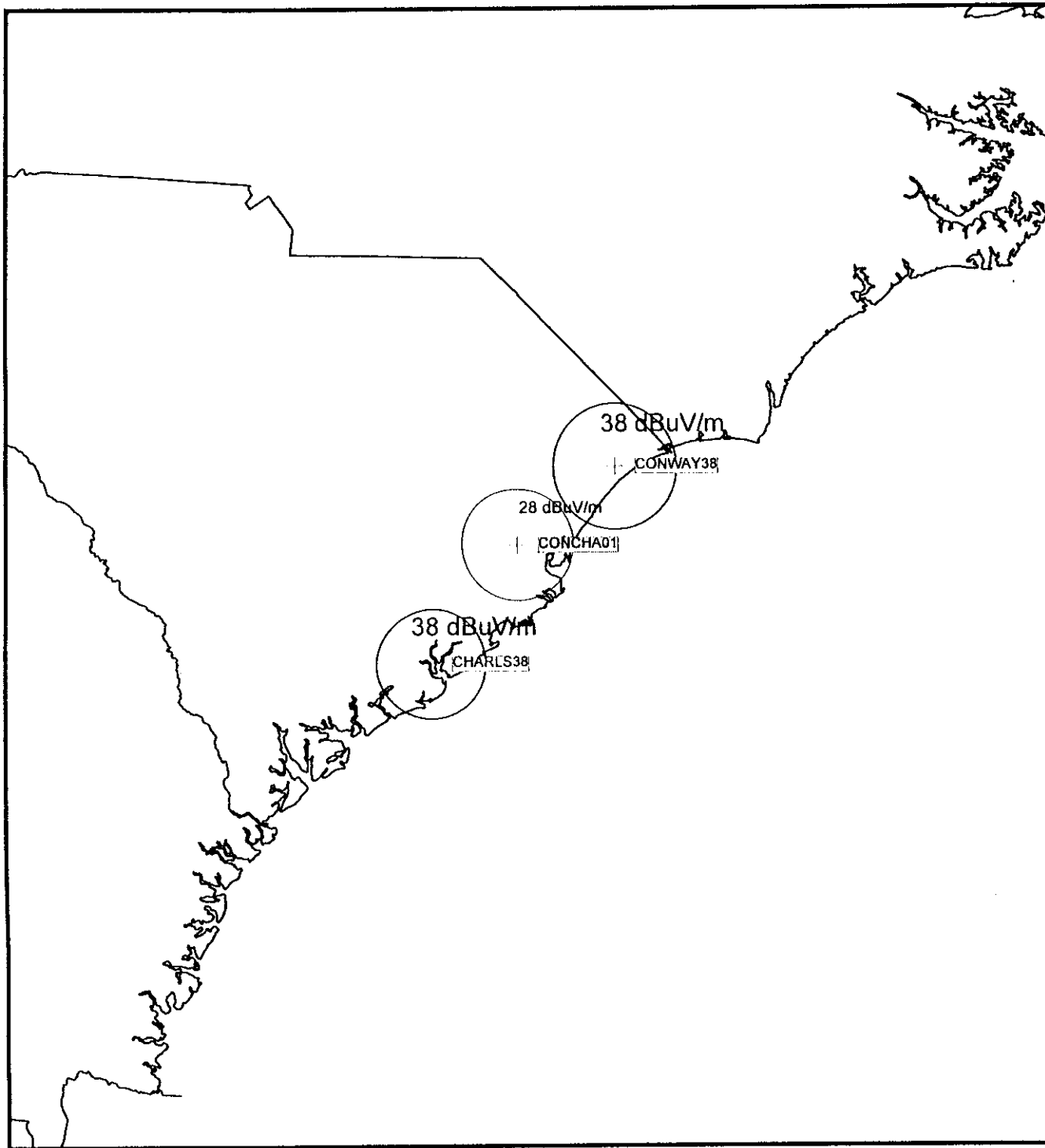
■ = 20.0 dBuV/m
Min. receiver threshold level: -200.0 dBmW



38/20 dBu CONTOUR STUDY

MOBEX COMM
BETWEEN MANASSAS & RICHMOND

Exhibit TCG-2b



SIGNAL™: MOBEX10.map

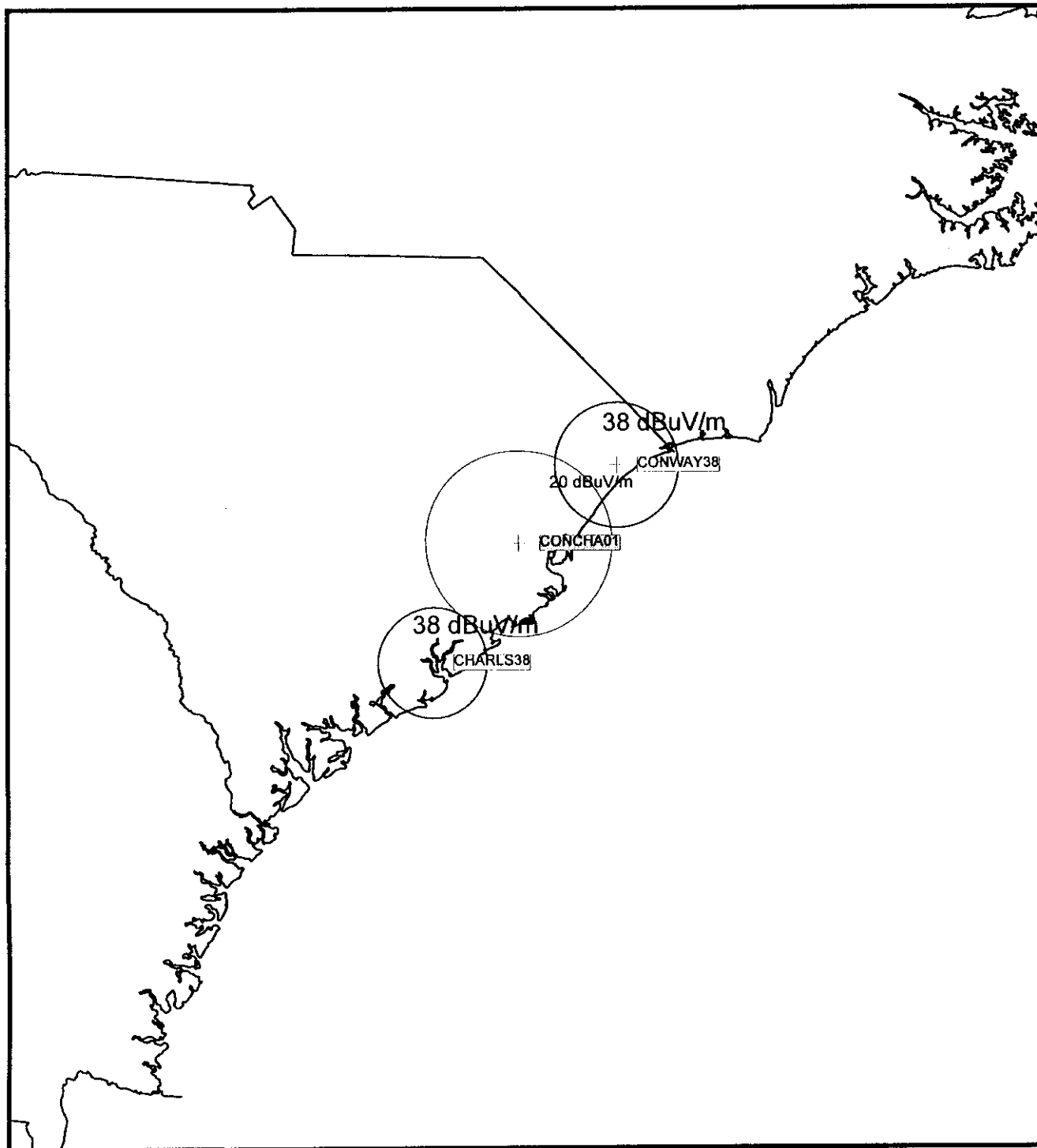
Prop. model: FCC-FCC
Time: 10.0% Loc.: 50.0%
Prediction Confidence Margin: 0.0dB
Climate: Continental Temperate
Groundcover: none
Atmospheric Abs.: none
K Factor: 1.333
RX Antenna - Type: OMNI
Height: 1.5 m AGL Gain: 0.00 dBd
Field strength at remote

■ = 28.0 dBuV/m
Min. receiver threshold level: -200.0 dBmW



38/28 dBu STUDY
MOBEX COMM
BETWEEN CONWAY & CHARLESTON

Exhibit TCG-3a



SIGNAL™: MOBEX11.MAP

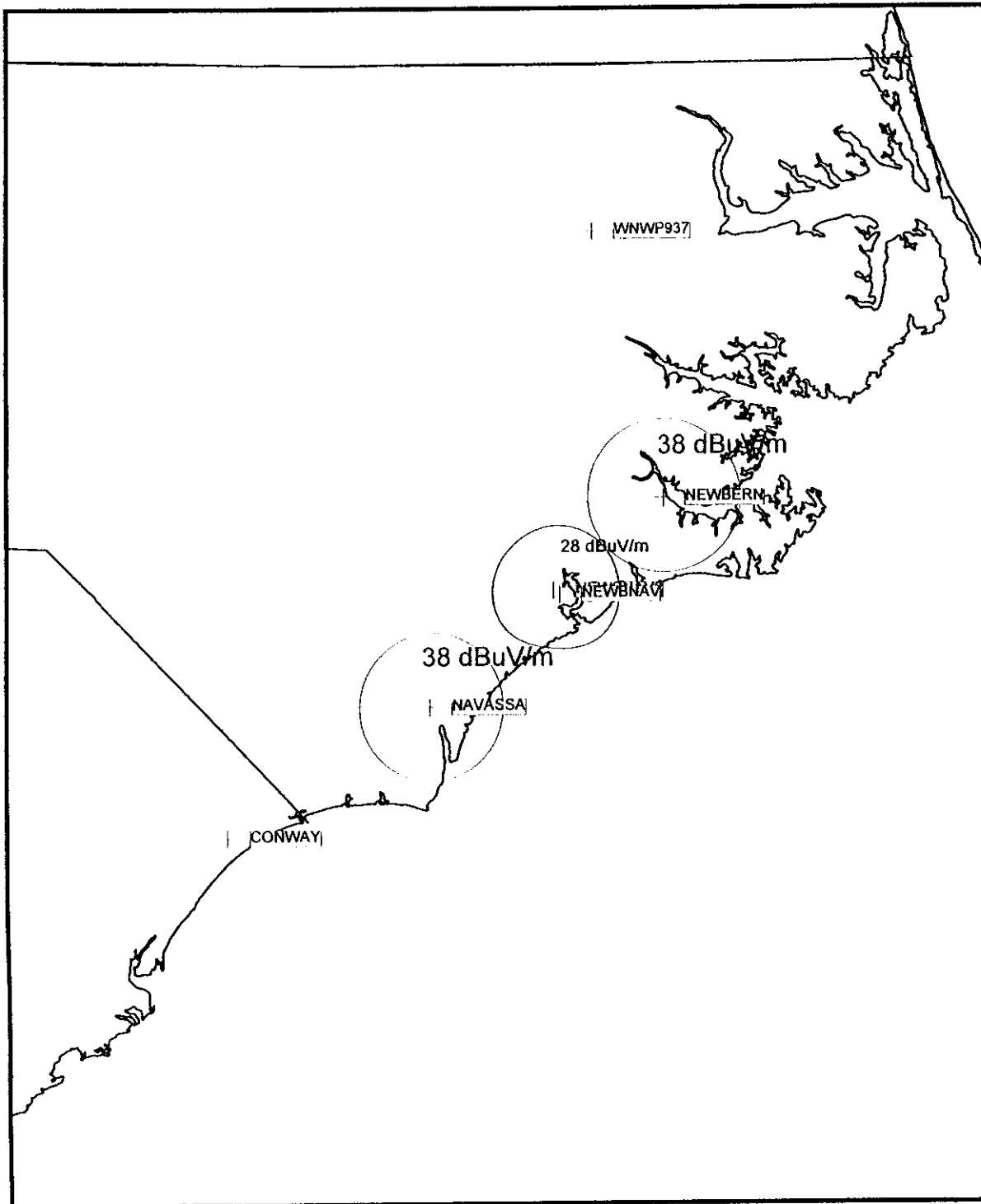
Prop. model: FCC-FCC
Time: 10.0% Loc.: 50.0%
Prediction Confidence Margin: 0.0dB
Climate: Continental Temperate
Groundcover: none
Atmospheric Abs.: none
K Factor: 1.333
RX Antenna - Type: OMNI
Height: 1.5 m AGL Gain: 0.00 dBd
Field strength at remote

■ = 20.0 dBuV/m
Min. receiver threshold level: -200.0 dBmW



38/20 dBu STUDY
MOBEX COMM
BETWEEN CONWAY & CHARLESTON

Exhibit TCG-3b



SIGNAL™: MOBEX03.MAP

Prop. model: FCC-FCC
Time: 10.0% Loc.: 50.0%
Prediction Confidence Margin: 0.0dB
Climate: Continental Temperate
Groundcover: none
Atmospheric Abs.: none
K Factor: 1.333
RX Antenna - Type: OMNI
Height: 1.5 m AGL Gain: 0.00 dBd
Field strength at remote

■ = 28.0 dBuV/m
Min. receiver threshold level: -200.0 dBmW

KILOMETERS

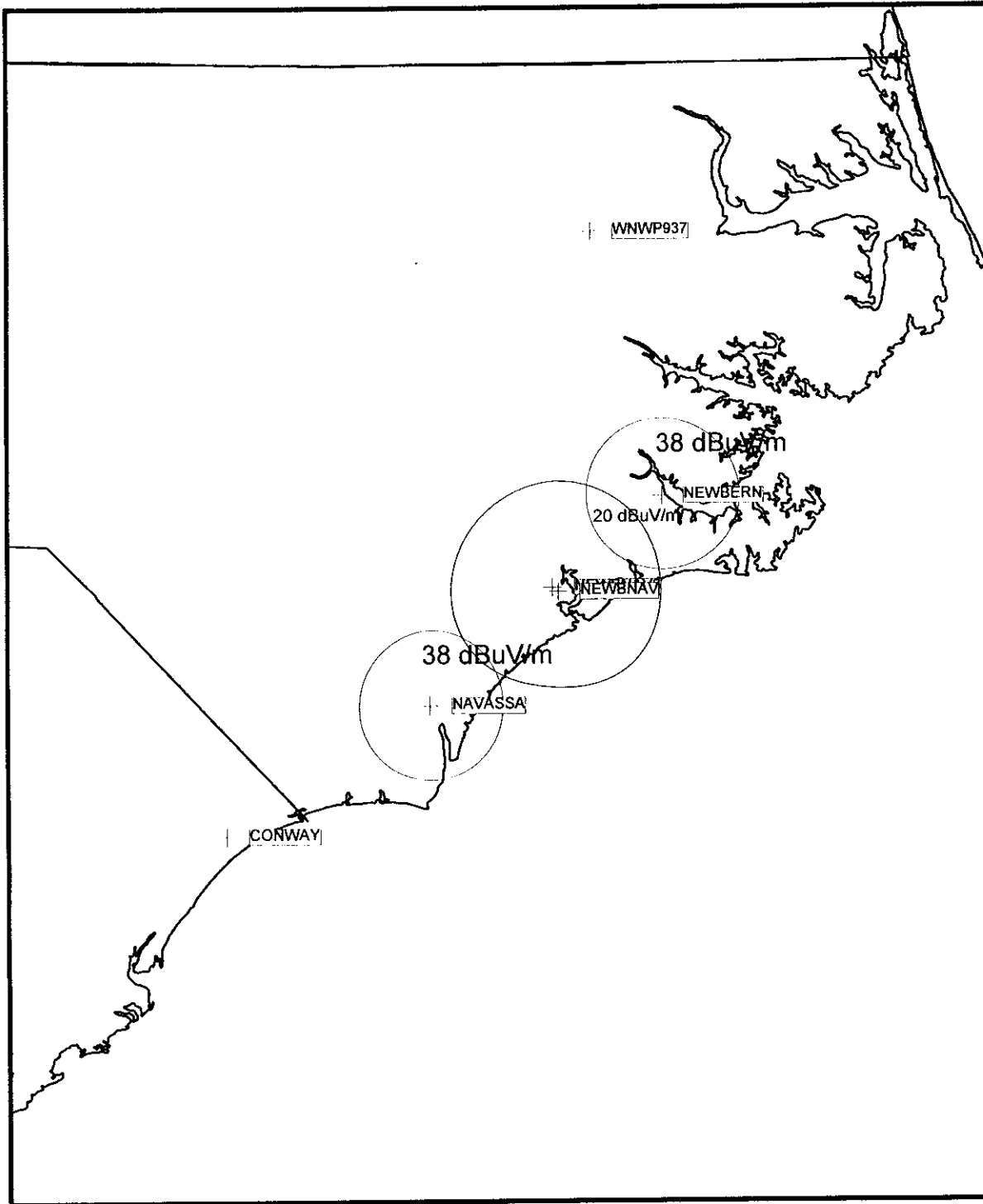


38 / 28 dBu CONTOUR STUDY

MOBEX COMM

BET NEWBERN & NAVASSA

Exhibit TCG-4a



SIGNAL™: MOBEX08.MAP

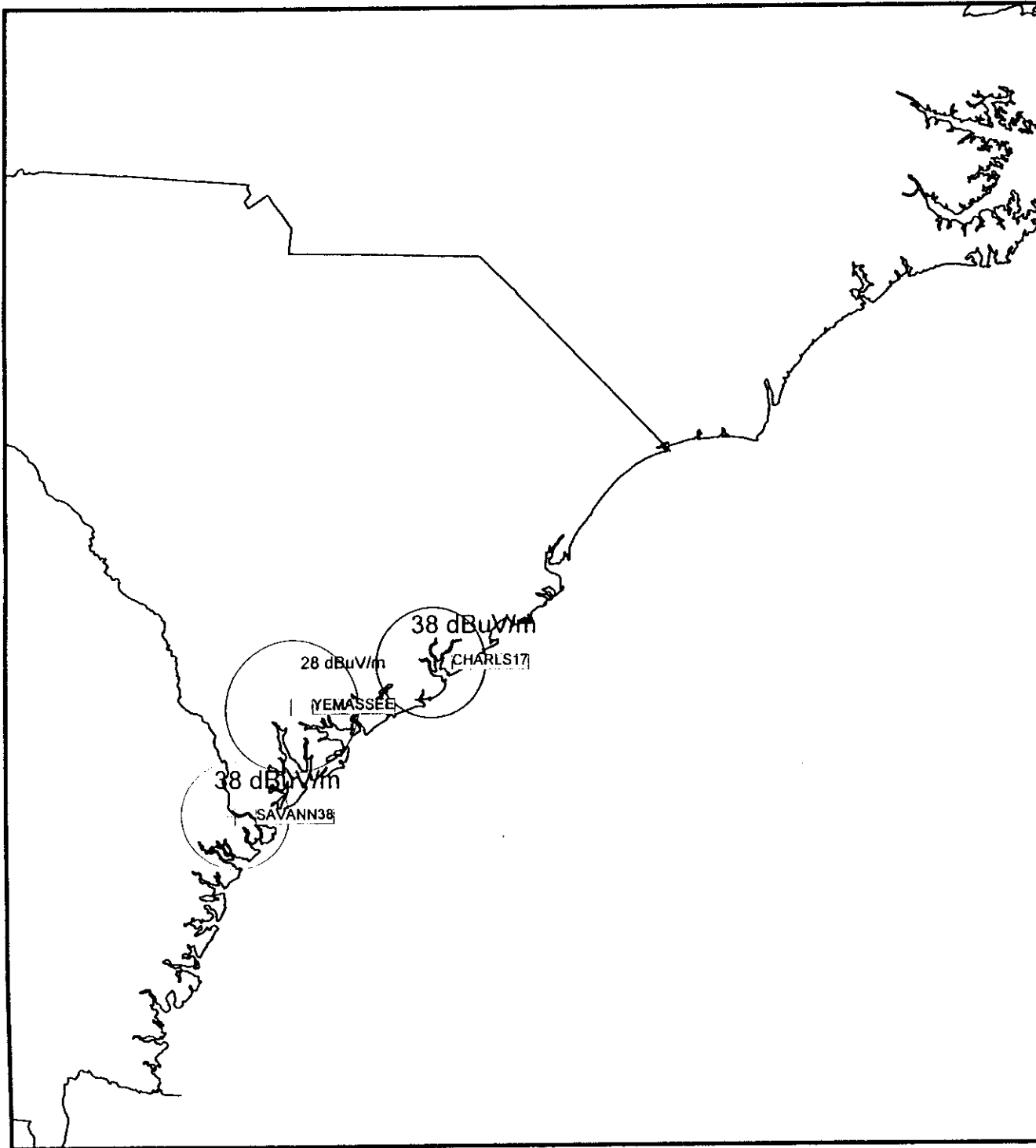
Prop. model: FCC-FCC
Time: 10.0% Loc.: 50.0%
Prediction Confidence Margin: 0.0dB
Climate: Continental Temperate
Groundcover: none
Atmospheric Abs.: none
K Factor: 1.333
RX Antenna - Type: OMNI
Height: 1.5 m AGL Gain: 0.00 dBd
Field strength at remote

■ = 20.0 dBuV/m
Min. receiver threshold level: -200.0 dBmW



38 / 20 dBu CONTOUR STUDY
MOBEX COMM
BET NEWBERN & NAVASSA

Exhibit TCG-4b



| | |
|---|--|
| SIGNAL™: MOBEX14.map | |
| Prop. model: FCC-FCC Time: 10.0% Loc.: 50.0% Prediction Confidence Margin: 0.0dB Climate: Continental Temperate Groundcover: none Atmospheric Abs.: none K Factor: 1.333 RX Antenna - Type: OMNI Height: 1.5 m AGL Gain: 0.00 dBd Field strength at remote | |
| ■ = 28.0 dBuV/m Min. receiver threshold level: -200.0 dBmW | |
| KILOMETERS -25 0 100 | |
| 38/28 dBu STUDY MOBEX COMM BETWEEN SAVANNAH & CHARLESTON | |
| Exhibit TCG-5a | |

